

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

ASAO, Yoshihito, et al.

Divisional Application of
Appln. No.: 09/624,222

Confirmation No.: Not yet assigned

Group Art Unit: 2834

Filed: October 18, 2001

Examiner: T. NGUYEN

For: ALTERNATOR AND METHOD OF MANUFACTURE THEREFOR

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Amend the specification by inserting before the first line the sentence:

This is a Divisional of Application No. 09/624,222 filed July 24, 2000, the disclosure of which is incorporated herein by reference.

IN THE CLAIMS:

Please cancel claim 1 without prejudice or disclaimer.

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Please enter the following amended claims:

2. In an alternator having:

a rotor for forming north-seeking (N) and south-seeking (S) poles alternately about a rotational circumference; and

a stator having:

a stator core surrounding said rotor; and

a polyphase stator winding installed in said stator core,

said stator core being formed with a number of slots extending axially at a predetermined pitch in a circumferential direction and being provided with an abutting portion extending axially, said abutting portion making said stator core into an annular shape by abutting end portions of said stator core,

said polyphase stator winding comprising a number of winding portions in which long strands of wire are wound so as to alternately occupy an inner layer and an outer layer in a slot depth direction within said slots at intervals of a predetermined number of slots, said strands of wire folding back outside said slots at axial end surfaces of said stator core, and

an insulating member being interposed between said stator core and said winding;

a method for manufacturing the alternator wherein said insulating member is first disposed on said winding before said winding is inserted into said slots of said stator core.

4. The method according to Claim 3 for manufacturing the alternator wherein:

a straight base insulating member is first disposed between said slots and said winding;

said base insulating member is interposed between said stator core and said winding by inserting said winding into said slots; and

said insulating member is later formed by dividing said base insulating member between said slots.

5. The method according to Claim 3 for manufacturing the alternator wherein:

a straight base insulating member is first disposed between said slots and said winding;
and

said insulating member is formed by dividing said base insulating member between said slots as said winding is being inserted into said slots and said base insulating member is being interposed between said stator core and said winding.

6. The method according to Claim 3 for manufacturing the alternator wherein:

a straight base insulating member is first disposed between said slots and said winding;
said base insulating member is interposed between said stator core and said winding by inserting said winding into said slots; and

said insulating member is later formed by dividing said base insulating member between said slots together with inner circumferential dimension processing of said stator core.

7. The method according to Claim 3 for manufacturing the alternator wherein:

a straight base insulating member is first disposed between said slots and said winding;
said base insulating member is interposed between said stator core and said winding by inserting said winding into said slots; and

said insulating member is later formed by dividing said base insulating member between said slots after securing said base insulating member with resin.

8. The method according to Claim 3 for manufacturing the alternator wherein said insulating member is formed by dividing said base insulating member between said slots when end portions of teeth defining said slots are being pressed and plastically deformed.

REMARKS

Amendments to claims 4-8 were made in order to remove apparent multiple dependencies and avoid the Government surcharge and any confusion by the Examiner. Entry and consideration of this Amendment is respectfully requested.

Respectfully submitted,



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Date: October 18, 2001

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 1 is canceled.

The claims are amended as follows:

2. (Amended) In an alternator having:

a rotor for forming north-seeking (N) and south-seeking (S) poles alternately about a rotational circumference; and

a stator having:

a stator core surrounding said rotor; and

a polyphase stator winding installed in said stator core,

said stator core being formed with a number of slots extending axially at a predetermined pitch in a circumferential direction and being provided with an abutting portion extending axially, said abutting portion making said stator core into an annular shape by abutting end portions of said stator core,

said polyphase stator winding comprising a number of winding portions in which long strands of wire are wound so as to alternately occupy an inner layer and an outer layer in a slot depth direction within said slots at intervals of a predetermined number of slots, said strands of wire folding back outside said slots at axial end surfaces of said stator core, and

an insulating member being interposed between said stator core and said winding;

a method for manufacturing the alternator [according to Claim 1] wherein said insulating member is first disposed on said winding before said winding is inserted into said slots of said stator core.

4. (Amended) The method according to Claim 3 for manufacturing the alternator
[according to Claim 1] wherein:

a straight base insulating member is first disposed between said slots and said winding;
said base insulating member is interposed between said stator core and said winding by
inserting said winding into said slots; and
said insulating member is later formed by dividing said base insulating member between
said slots.

5. (Amended) The method according to Claim 3 for manufacturing the alternator
[according to Claim 1] wherein:

a straight base insulating member is first disposed between said slots and said winding;
and
said insulating member is formed by dividing said base insulating member between said
slots as said winding is being inserted into said slots and said base insulating member is being
interposed between said stator core and said winding.

6. (Amended) The method according to Claim 3 for manufacturing the alternator
[according to Claim 1] wherein:

a straight base insulating member is first disposed between said slots and said winding;
said base insulating member is interposed between said stator core and said winding by
inserting said winding into said slots; and
said insulating member is later formed by dividing said base insulating member between
said slots together with inner circumferential dimension processing of said stator core.

7. (Amended) The method according to Claim 3 for manufacturing the alternator
[according to Claim 1] wherein:

a straight base insulating member is first disposed between said slots and said winding;
said base insulating member is interposed between said stator core and said winding by
inserting said winding into said slots; and

said insulating member is later formed by dividing said base insulating member between
said slots after securing said base insulating member with resin.

8. (Amended) The method according to Claim 3 for manufacturing the alternator
[according to Claim 1] wherein said insulating member is formed by dividing said base
insulating member between said slots when end portions of teeth defining said slots are being
pressed and plastically deformed.